Information Technology to Increase the Administrative Efficiency for Academics on the New Normal the Graduate Level in Bangkok and the Surrounding Area

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Abstract

The objectives of this research were 1) to study the current conditions, desired conditions and priority needs index of the information technology to increase the efficiency of the academic administration. 2) to compare the current conditions and desired conditions for using information technology to increase the efficiency of the academic administration. 3) to set guidelines for using information technology to increase the efficiency of academic administration. 4) to confirm guidelines for using information technology to increase the administrative efficiency for academics. The sample consisted of 268 administrators, teachers and students in graduate private universities in Bangkok and the surrounding area. The research instrument was a questionnaire with IOC values between 0.67-1.00 and alpha 0.895. The data were analyzed by using frequency, percentage, mean, standard deviation, t-test and the priority needs index with $PNI_{Modified}$. The research results were as follows: 1) The current conditions of information technology was overall at a high level. In classified by aspect, It was at the high level in every aspect, ranking from high to low as follows: teaching process, teachers, regulation, instructional media, data, students, technology, information, and infrastructure respectively. The overall desirable condition was at the highest level. In the classification by aspect, the overall desirable condition was at the highest level in 8 areas, ranking from high to low average: teachers, data, instructional media, regulation, students, teaching process, infrastructure, and technology, One area, information was at a high level. 2) The current conditions and desired conditions for using information technology overall *and each aspect were significantly different at the .001 level. 3) The* guidelines that have been confirmed by the experts on: The priority needs index was equal to 0.263. The ranking necessity from 1-9: Infrastructure (0.366), data (0.307), teaching media (0.304), students (0.294), regulation (0.290), technology (0.280), Teachers (0.276), teaching process (0.260) and information (0.003). The guidelines obtained from the research were: 1) Technology 2) Information 3) Students 4) Teachers 5) Teaching Media 6) Teaching Process 7) Infrastructure 8) Data and 9) Regulation.

Keywords: Information Technology, Academic Management, Graduate Level

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Introduction

The situation in Thailand after the COVID-19 has significantly affected the lives of people, especially in bringing to various changes around very university. Developing people to accept change is an important factor of educational management. People must rely on information technology, but to access to information technology in Thailand lacks the equality of the opportunity and the access rights. This makes the quality of education in the upcountry different from that in the capital. Comparing to some IT leading countries in ASEAN. Thailand is still in behind. According to the National Education Act B.E. 2019, Section 32/1 stipulates that the Ministry of Higher Education, Science, Research, Innovation has the authority to organize higher education. (Ministry of Education, 2017)

The public and private universities in Thailand under the Ministry of Higher Education, Science Research and Innovation play a role in organizing higher education, which have been affected by the pandemic spreading of COVID-19. Then they need the changes in the education management and teaching systems. The most obvious approach is to organize the online teaching. This requires innovation in the diverse ideas of teachers in order to organize the most effective teaching and learning. Thairath Online (2020).

In present day, the Thai government has determined that there will be regular teaching and learning arrangements. As a result, during this transition period, the university still has to organize the online and onsite teaching and learning. The university also has to strengthen the developing programs, technological media development, and electronics tools for managing learning both online and onsite. From a study by Thairath Online (2020), it was found that the online learning arrangements of educational institutions throughout Thailand have had a huge impact on students, teachers, and parents with many disadvantages.

The researcher is therefore interested in studying “Information technology to increase administrative efficiency for academics on the new normal in Bangkok and the surrounding area”, which comply to the concept of Sukhothai Thammathirat open university (2016): technology, information, students, teachers, instructional media, teaching Process, infrastructure, data, regulation, and applying these concepts to this research.

Research design

Content Scope

Information technology for management according to the concept of Sukhothai Thammathirat open university, which includes 9 factors: 1) Technology 2) Information 3) Students 4) Teachers 5) Instructional Media 6) Teaching Process 7) Infrastructure 8) Data 9) Regulation

Population and Sample Scope

The population consisted of the universities in Bangkok and the surrounding area.

Samples

1. Quantitative sample group: The sample included 10 universities in Bangkok and the surrounding areas. Each university had 5 administrators, 10 teachers and 15 students selected by simple random sampling method. (Krejcie & Morgan, 1970)

2. Qualitative sample group: The sample included 9 experts for interviews and 5 experts for confirm the guidelines in this research. We required that they have a doctoral degree and teaching in graduate school.

Research Instrument

Quantitative instrument: The questionnaire had 2 episodes. Episode 1: The respondents for general information using a checklist of 4 items. Episode2: the opinions about the current conditions and desired conditions in using information technology among the administrators, professors, and students in private universities. It includes 9 aspects and 45 items.

Qualitative instrument,

1) Structural interview for 9 experts

2) Evaluation form to check and confirm the guidelines by 9 experts

Data Collection: The results of the complete data collection operation were 268 data, accounting for 89.33%

Data analysis and statistics

1. Analyze the status of the respondents using frequency and percentage.

2. Analyze the current conditions and desirable conditions of the information technology to increase administrative efficiency for academics on the new normal the graduate level in Bangkok and the surrounding area by mean, standard deviation, and analyze the priority needs Index by PNI_{modify}=(I-D)/D. (Nonglak Wiratchai, 2012)

3. Compare the current conditions and desirable conditions of the information technology to increase the administrative efficiency for academics on the new normal the graduate level in Bangkok and the surrounding area by One Way ANOVA using t-test statistics. (Bunchom Srisa-at, 2017)

4. Analyze the results of interviews with 9 experts by content analysis.

5.Analyze guidelines of information technology to increase administrative efficiency for academics on the new normal the graduate level in Bangkok and the surrounding area. It was qualitative research using content analysis.

6. Check and confirm the guidelines of information technology to increase the administrative efficiency for academics on the new normal the graduate level in Bangkok and the surrounding area by 5 experts.

Research Result

1. The status of the respondents was analyzed using frequency and percentage, as shown in Table 1.

Table 1: Results of the analysis of the questionnaire on the status of the respondents.

Status		Number	Percentage
1. Gender	1.1 Male	107	39.93
	1.2 Female	161	60.07
	Total	**268**	**100**
2 . Age	2.1 20-30 years	25	9.33
	2.2 31-40 years	74	27.61
	2.3 41-50 years	87	32.46
	2.4 More than 51 years	82	30.60
	Total	**268**	**100**
3. Teacher's Status			
	3.1 Administrators		
	1) Rector	-	-
	2) Vice Rector / Assistant Rector	3	1.12
	3) Dean / Deputy Dean	15	5.60
	4) Course Director	22	8.21
	3.2 Teachers		
	1) Teachers at Graduate Certificate Level	12	4.48
	2) Teacher at Master's Degree	71	26.49
	3) Teacher at Doctoral Degree	12	4.48
	3.3 Student		
	1) Graduate certificate level	12	4.48
	2) Master Degree Level	107	39.93
	3) Doctoral Degree Level	14	5.22
	Total	**268**	**100**

Table 1: (Continue)

Status	Number	Percentage
4. Faculty Affiliation		
1) Faculty of Education	102	39.06
2) Faculty of Liberal Arts	97	36.19
3) Others	69	25.74
Total	268	100

Table 2: The current study: desired conditions and the need for guidelines of information technology

n=268

No	Using Information Technology	Current condition				Desired condition				PNI modify	Priority needs Order
		$\overline{X}$	S.D.	level	Oder	$\overline{X}$	S.D.	level	Oder		
1	Technology	3.68	0.58	high	7	4.71	0.47	highest	8	0.280	6
2	Information	3.52	0.51	high	8	3.53	0.51	high	9	0.003	9
3	Students	3.71	0.69	high	6	4.80	0.42	highest	5	0.294	4
4	Teachers	3.81	0.74	high	2	4.86	0.34	highest	1	0.276	7
5	Instructional media	3.72	0.67	high	4	4.85	0.37	highest	3	0.304	3
6	Teaching process	3.81	0.72	high	1	4.80	0.43	highest	6	0.260	8
7	Infrastructure	3.50	0.60	high	9	4.78	0.44	highest	7	0.366	1
8	Data	3.71	0.64	high	5	4.85	0.34	highest	2	0.307	2
9	Regulation	3.73	0.79	high	3	4.81	0.45	highest	4	0.290	5
	Total	**3.69**	**0.57**	**high**		**4.66**	**0.30**	**highest**		**0.263**	

From Table 4.1, It was found that they were 107 males, accounting for 39.93%, and 161 females, accounting for 60.07%. Ages between 20-30 had 25 people, accounting for 9.33%. Ages between 31-40 had 74 people, accounting for 27.61%. Ages between 41-50 had 87 people, accounting for 32.46%. Ages over 51 years had 82 people, accounting for 30.60%. The respondents included 3 vice rectors/assistant rectors, accounting for 1.12%, 15 Deans /deputy deans, accounting for 5.60% And 22 **course directors,** accounting for 8.21%.The teachers teaching at the graduate certificate level had 12 people, accounting for 4.48%.

Teaching at master's degree level had 17 people, accounting for 26.49%. Teaching at doctoral degree level had 12 people, accounting for 4.48%. The students in the graduate certificate level had 12 people, accounting for 4.48%. Master's degree had 107 people, accounting for 39.93%. Doctoral degree had 14 people, accounting for 5.52%. The respondents 102 people affiliated with the Faculty of Education, accounting for 39.06%; 97 people affiliated with the Faculty of Liberal Arts, accounting for 39.19 %; and 69 people affiliated with other faculties, accounting for 25.74 %.

2. Results of the current study: desired conditions and the need for guidelines of the information technology to increase the administrative efficiency for academics on the new normal the Graduate Level in Bangkok and the surrounding area in Table 2

From table 2: it was found that the information technology to increase the administrative efficiency

for academics on the new normal the graduate level in Bangkok and the surrounding area showed that the overall current condition was at a high level ($\overline{X}$=3.69, S.D.=0.57), the overall desirable condition was at the highest level ($\overline{X}$=4.66, S.D.=0.30) and the needs index was equal to 0.263.

The current condition was at a high level ($\overline{X}$=3.69, S.D.=0.57). When classified into each aspect, It was at a high level in every aspect, arranged from high to low average as follows: Teaching process ($\overline{X}$=3.81, S.D. 0.=0.72), Teachers ($\overline{X}$=3.81, S.D.=0.74), Regulation ($\overline{X}$=3.73, S.D.=0.79), Instructional media ($\overline{X}$=3.72, S.D.=0.67), Data ($\overline{X}$=3.71, S.D.=0.64), Students ($\overline{X}$=3.71, S.D.=0.69), Technology ($\overline{X}$=3.68, S.D.=0.58), Information ($\overline{X}$=3.52, S.D.=0.51), and Infrastructure ($\overline{X}$=3.50, S.D.=0.60), respectively.

The desired condition was at the highest level ($\overline{X}$=4.66, S.D.=0.30). When classified by aspect, it was at the highest level in 8 areas, arranged from high to low average as follows: Teachers ($\overline{X}$=4.86, S.D.=0.34), Data ($\overline{X}$=4.85, S.D.=0.34), Instructional media ($\overline{X}$=4.85, S.D.=0.37), Regulation ($\overline{X}$=4.81, S.D.=0.45), Students ($\overline{X}$=4.80, S.D.=0.42), Teaching process ($\overline{X}$=4.80, S.D=0.43), Infrastructure ($\overline{X}$=4.85, S.D.=0.34), Technology ($\overline{X}$=4.71, S.D.=0.47) and it was at a high level 1 area: Information ($\overline{X}$=3.53, S.D.=0.51),

The index of needs for the information technology to increase the administrative efficiency for academics on the new normal the graduate level in Bangkok and the surrounding area was analyzed using the priority needs index (PNI_{modify}). The rankings from 1 to 7 were: Infrastructure (0.366), Data (0.307), Instructional Media (0.304), Students (0.294), Regulation (0.290), Technology (0.280), Teachers (0.276), Teaching process (0.260), and Information (0.003), respectively.

3. Comparison of current conditions and desirable conditions of the information technology to increase the administrative efficiency for academic in the new normal in Table 3

From Table 3, it was found that the current conditions and desired conditions of the information technology to increase the administrative efficiency for academics on the new normal after the graduate level in Bangkok and the surrounding area, overall and in each aspect, were significantly different at the .001 level.

4. Setting guidelines of the information technology to increase the administrative efficiency for academics on the new normal the graduate level in Bangkok and the surrounding area by referring to 9 experts as shown in Table 4.

Table 3: Comparison of current conditions and desirable conditions

site	Using information technology	Current conditions		Desirable conditions		t	Sig
		$\overline{X}$	S.D.	$\overline{X}$	S.D.		
1	Technology	3.68	.58	4.71	.47	104.25***	.000
2	Information	3.52	.51	3.53	.51	112.21***	.000
3	Students	3.71	.69	4.80	.42	87.56***	.000
4	Teachers	3.81	.74	4.86	.34	84.58***	.000
5	Instructional Media	3.72	.67	4.85	.37	90.76***	.000
6	Teaching Process	3.81	.72	4.80	.42	86.60***	.000
7	Infrastructure	3.50	.60	4.78	.44	95.00***	.000
8	Data	3.71	.64	4.85	.34	94.93***	.000
9	Regulation	3.73	.79	4.81	.45	77.80***	.000
	Total	**3.69**	**.57**	**4.66**	**.30**	**105.45*** **	**.000**

*** Significance at .001

Table 4 : The guidelines of information technology to increase administrative efficiency for academics

Technology and information to increase the administrative efficiency for academics	Guidelines of the information technology to increase the administrative efficiency for academics in the new normal after COVID-19 at the graduate level in Bangkok and the surrounding area
1. Technology	1.1 Policy
	1.2 Technology for work
	1.3 Technological accessories
	1.4 Center for technology control and services
	1.5 Technology support program
	1.6 Personnel Development
2. Information	2.1 Information system maintenance centre
	2.2 Artificial Intelligence= AI
	2.3 Software
	2.4 Legal Copyright
3. Students	3.1 Information technology capabilities
	3.2 Compliance with the law
	3.3 Discipline
	3.4 Awareness in changes
	3.5 Morality and Ethics
	3.6 Academic freedom and opportunity
4. Teachers	4.1 Information technology capabilities
	4.2 Academic ability
	4.3 Role
	4.4 Ethics
	4.5 Teacher qualifications
5. Instructional media	5.1 Technology media
	5.2 Program
	5.3 Abilities of User
6. Teaching process	6.1 Active learning
	6.2 Online Teaching
	6.3 Onsite Teaching
	6.4 Hybrid Teaching
	6.5 Case study
	6.6 Research base
	6.7 Project base
	6.8 Problem base
	6.9 Work from home or work from anywhere

From Table 4.13, it was found that the guidelines of the information technology to increase the administrative efficiency for academics on the new normal the graduate level in Bangkok and the surrounding area, based on interviews with 9 experts, consist of 9 areas and 41 sub-variables.

5.Check and confirm guidelines of the information technology to increase the administrative efficiency for academics on the new normal the graduate level in Bangkok and the surrounding area, as shown in table5

Table 4 : (continue)

Technology and information to increase the administrative efficiency for academics	Guidelines of the information technology to increase the administrative efficiency for academics in the new normal after COVID-19 at the graduate level in Bangkok and the surrounding area
7. Infrastructure	7.1 Hardware
	7.2 Software
	7.3 Network
	7.4 Database
8. Data	8.1 Primary Data
	8.2 Secondary Data
9. Regulation	9.1 Rules
	9.2 Ethics

Table 5: Confirm guidelines of the information technology by 5 experts

No	Guidelines of information technology	Opinion							
		Correct		Appropriate		Possible		utilization	
		frequency	%	frequency	%	frequency	%	frequency	%
1. Technology		5	100	5	100	5	100	5	100
1.1 Policy		5	100	4	80	4	80	4	80
1.2 Technology for work		5	100	5	100	5	100	5	100
1.3 Technological accessories		5	100	5	100	5	100	5	100
1.4 Centre for technology and services		5	100	5	100	5	100	5	100
1.5 Technology support program		5	100	5	100	5	100	5	100
1.6 Personnel Development		5	100	5	100	5	100	5	100
2. Information		5	100	5	100	5	100	5	100
2.1 Information system maintenance centre		5	100	5	100	3	60	5	100
2.2 Artificial Intelligence=AI)		5	100	5	100	3	60	5	100
2.3 Software		5	100	5	100	3	60	5	100
2.4 Legal Copyright		5	100	3	60	3	60	5	100

Table 5: (continue)

No	Guidelines of information technology	Opinion							
		Correct		Appropriate		Possible		utilization	
		frequency	%	frequency	%	frequency	%	frequency	%
3. Students		5	100	5	100	5	100	5	100
3.1 Information technology capabilities		5	100	5	100	3	100	5	100
3.2 Compliance with the law		5	100	4	80	3	60	4	80
3.3 Discipline		5	100	5	100	5	100	5	100
3.4 Awareness in changes		5	100	5	100	3	60	5	100
3.5 Morality and Ethics		5	100	5	100	5	100	5	100
3.6 Academic freedom / opportunity		5	100	3	60	3	60	5	100
4. Teachers		5	100	5	100	5	100	5	100
4.1 Information technology capabilities		5	100	5	100	5	100	5	100
4.2 Academic abilities		5	100	5	100	5	100	5	100
4.3 Role		5	100	5	100	5	100	5	100
4.4 Ethics		5	100	5	100	5	100	5	100
4.5 Teacher qualifications		5	100	5	100	5	100	5	100
5. Instructional media		5	100	5	100	5	100	5	100
5.1 Technology media		5	100	5	100	5	100	5	100
5.2 Program		5	100	5	100	5	100	5	100
5.3 Abilities of User		5	100	5	100	5	100	3	100
6. Teaching process		5	100	5	100	5	100	5	100
6.1 Teaching by Active learning		5	100	5	100	5	100	5	100
6.2 Online		5	100	5	100	5	100	5	100
6.3 Onsite		5	100	5	100	5	100	5	100
6.4 Hybrid		5	100	5	100	5	100	5	100
6.5 Case study		5	100	5	100	5	100	5	100
6.6 Research base		5	100	5	100	5	100	5	100
6.7 Project base		5	100	5	100	5	100	5	100
6.8 Problem base		5	100	5	100	5	100	5	100
6.9 Work from home / from anywhere		5	100	5	100	5	100	5	100
7 Infrastructure		5	100	5	100	5	100	5	100
7.1 Hardware		5	100	5	100	5	100	5	100
7.2 Software		5	100	5	100	4	80	4	80

Table 5: (continue)

No	Guidelines of information technology	Opinion							
		Correct		Appropriate		Possible		utilization	
		frequency	%	frequency	%	frequency	%	frequency	%
	7.3 Network	5	100	5	100	4	80	4	80
	7.4 Database	5	100	3	100	3	60	5	100
8.	**Data**	5	100	5	100	5	100	5	100
	8.1 Primary Data	5	100	5	100	5	100	5	100
	8.2 Secondary Data	5	100	5	100	5	100	5	100
9.	**Regulation**	5	100	5	100	5	100	5	100
	9.1 Rules	5	100	5	100	5	100	5	100
	9.2 Ethics	5	100	5	100	5	100	5	100
	Total 9 areas	**45**	**-**	**45**	**-**	**45**	**-**	**45**	**-**
	Total average 9 areas	**5**	**100**	**5**	**100**	**5**	**100**	**5**	**100**
	Total 41 items	**205**	**-**	**197**	**-**	**185**	**-**	**199**	**-**
	Total average 41 items	**5**	**100**	**4.81**	**96.20**	**4.51**	**90.20**	**4.85**	**97.00**

From Table 5, it was found that the inspection and evaluation by 5 experts on the guidelines for using the information technology to increase the administrative efficiency for academics on the new normal the graduate level in private universities in Bangkok and the surrounding area, they gave an opinion that overall the guidelines were correct with a frequency of 5 points or 100%, appropriate with a frequency of 5 points or 100%, useful with a frequency of 5 points or 100 %, and feasible with a frequency of 5 points or 100%. When categorizing each item, the overall 41 items were found to be 100% correct guideline, 96.20% appropriate guideline, 90.20% possible guideline, 97.00 useful guideline.

Conclusion

The result of this research found that:

1. The current conditions of the information technology to increase the administrative efficiency for academics on the new normal the graduate level in Bangkok and the surrounding area in the overall was at a high level and the desired conditions was at a highest level. They were significantly different at 0.001 level.

2. The priority needs Index arranged in order were Infrastructure, data, teaching media, students, regulation, technology, teaching process and information.

3. The guidelines obtained from the research were: technology, information, students, teachers, teaching media, teaching process, infrastructure, data and Regulation respectively.

4. The results of confirming the guidelines for using information technology were 9 aspects and 41 variables, consisting of 9 aspects and 41 variables:

4.1 Technology had 6 variables were 1) policy 2) center for technology control and services 3) technology support program 5) personnel 6) development.

4.2 Information had 4 variables were 1) information system maintenance centre 2) artificial intelligence= AI 3) software 4) legal copyright.

4.3 Students had 6 variables were 1) information technology capabilities 2) compliance with the law 3) discipline 4) awareness in changes 5) morality and ethics 6) academic freedom and opportunity.

4.4 Teachers had 5 variables were 1) information technology capabilities 2) academic ability 3) role 4) ethics 5) teacher qualifications.

4.5 Teaching media had 3 variables were 1) technology media 2) program 3) abilities of user.

4.6 Teaching process had 9 variables were 1) active learning 2) online teaching 3) on-site teaching 3) hybrid teaching 4) case study 5) research base 6) project base 7) problem base 8) work from home 9) work from anywhere

4.7 Infrastructure had 4 variables were 1) hardware 2) software 3) network 4) database

4.8 Data had 2 variables were 1) primary data 2) secondary data)

4.9 Regulation had 2 variables were 1) rules 2) ethics

5. Results confirming guidelines for using information technology from 5 experts to be correctness, appropriateness, usefulness, applicability calculated as 100%

Discussion

1. The current condition in using of the information technology to increase the efficiency of the academic administration was at a high level. This may be because of the private university is facing with high competition and recruit fewer students. Therefore, it was needed to have a strategy for recruiting students to provide quality education. The university must have standards which enable to be superior to the competitors. It is the only way to survive and maintain the status of a university in society. Then the performance of the university could be at a high level. This is consistent with Ratchanok Meechukhan (2022), who studied the use of the information and communication technology in the academic administration and found it was at the same high level of performance. It is also consistent with Ratchanok Brahmasiri (2019), who studied the use of the technology in educational management at a university in Phitsanulok province and found that the use of the technology in educational management was at a high level of performance too.

2.The desired conditions in the use of the information technology to increase the efficiency of the academic administration were at the highest level. This may be because administrators and students want to develop beyond the current standards and enter the 5.0 and 6.0 eras, thus keeping their opinions at the highest level. This is consistent with Panee Maneewong (2017), who studied the needs assessment for the online training in the information technology and communication of personnel, Thotsapon Silla (2022) of Rangsit University found that it was at the highest level, and who studied the necessary needs in using the information technology for the administration of colleges under the office of the Vocational Education Commission in Lopburi Province and found that it was at the highest level too.

3. The index of the needs for using the information technology to increase the administrative efficiency for academics on the new normal the graduate level in private universities in Bangkok and the surrounding area was analyzed using the priority needs index (PNI_{modify}). It was found that the demand index was ranked 1-7 as follows: infrastructure (0.366), data (0.307), instructional media (0.304), students (0.294), regulation (0.290), technology (0.280), teachers (0.276), teaching process (0.260) and information (0.003), respectively. This may be because the information technology has a great influence in supporting education in the universities. It is consistent with Thotsapon Silla (2022), who found the needs for the use of the information technology for the academic administration was as follows: 1) plans and cooperation (0.089), 2) academics (0.080), 3) resource management (0.0782), and 4) student affairs development (0.0550).

4. Comparison of the current conditions and desired conditions in using the information technology were significantly differences at 0.001 level. This may be because of the development of the information technology is constantly changing and evolving. The administrators, teachers, students, and graduate level need to develop themselves to have high potential, to be a professional, and to have a progressive future in larger and more complex organizations. In an interview,

Prof.Dr. Narin Sangraksa stated that to supervise a thesis, one must have high potential and morality. This is consistent with Nanthawan Ubonwat's (2020) research on the essential needs of the internet network systems for teaching and learning arrangements of Tha Luang Cementhai Anusorn Technical College, which found that the current conditions and the expected conditions are significantly different at 0.05 level.

5. Setting guidelines of the information technology to increase the administrative efficiency for academics on the new normal the graduate level in Bangkok and the surrounding area found that there were 9 aspects:

1) technology 2) information 3) students 4) teachers 5) instructional media 6) teaching process 7) infrastructure 8) data and 9) regulation, and obtained. This is consistent with the Sukhothai Thammathirat open university (2016) study on using the information technology to support learning management 9 aspects: 1) technology, 2) information 3) students, 4) teachers, 5) instructional media, 6) teaching process 7) infrastructure, 8)information and 9) regulation.

6. Check and confirm guidelines of the information technology to increase the administrative efficiency for academics on the new normal the graduate level on private universities in Bangkok and the surrounding area were accurate, appropriate, feasible. This is consistent with Ratchanok Brahmasiri's (2016) study on the academic administration model of the private universities towards excellence, which also found that correctness, suitability, feasibility and helpfulness were calculated as full 100 percent.

Research recommendations

1. Universities can use the research results to develop their academic administration.

2.Further research should be done on the development model for teachers of various generations in Thai universities.

3. Further research should be done on a model for the developing technology and information for teaching that emphasizes the soft skills of students.

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